
TITLE 327 WATER POLLUTION CONTROL DIVISION

**FINDINGS AND DETERMINATION OF THE COMMISSIONER
PURSUANT TO [IC 13-14-9-7](#) AND SECOND NOTICE OF COMMENT PERIOD**
LSA Document #21-132

DEFINITION OF "PUBLIC WATER SYSTEM"**PURPOSE OF NOTICE**

The Indiana Department of Environmental Management (IDEM) is soliciting public comment on amendments to rules at [327 IAC 8-1-3](#), [327 IAC 8-2-1](#), [327 IAC 8-4.1-1](#), and [327 IAC 8-10-1](#) concerning adding language to the definition of "public water system" so the state definition is consistent with the federal definition. Additionally, a clarification to [327 IAC 8-2.5-2\(b\)\(2\)](#) is needed to satisfy the United States Environmental Protection Agency (U.S. EPA) review of the state rules for primacy approval. Minimal formatting changes may also be made to conform to the Administrative Rules Drafting Manual. The purpose of this notice is to seek public comment on the draft rule, including suggestions for specific language to be included in the rule. IDEM seeks comment on the affected citations listed and any other provisions of Title 327 that may be affected by this rulemaking.

CITATIONS AFFECTED: [327 IAC 8-1-3](#); [327 IAC 8-2-1](#); [327 IAC 8-2.5-2](#); [327 IAC 8-4.1-1](#); [327 IAC 8-10-1](#).

AUTHORITY: [IC 13-13-5](#); [IC 13-14-8](#); [IC 13-14-9](#); [IC 13-18-3](#).

STATUTORY REQUIREMENTS

[IC 13-14-9-7](#) recognizes that under certain circumstances it may be appropriate to reduce the number of public comment periods routinely provided. In cases where the commissioner determines that the rulemaking policy alternatives available to IDEM are so limited that the first notice of public comment period would provide no substantial benefit to the environment or persons to be regulated or otherwise affected by the proposed rule, IDEM may forgo this comment period and proceed directly to the notice of second public comment period.

If the commissioner makes the determination of limited rulemaking policy alternatives required by [IC 13-14-9-7](#), the commissioner shall prepare written findings and include them in the second notice of public comment period published in the Indiana Register. This document constitutes the commissioner's written findings pursuant to [IC 13-14-9-7](#).

The statute provides for this shortened rulemaking process if the commissioner determines that "the rulemaking policy alternatives available to the department are so limited that the public notice and comment period under [IC 13-14-9-3](#). . . would provide no substantial benefit to:

- (1) the environment; or
- (2) persons to be regulated or otherwise affected by the proposed rule".

BACKGROUND

IDEM has approval from U.S. EPA to implement drinking water programs in Indiana under the Safe Drinking Water Act (SDWA). This approval is referred to as having primacy. Maintaining primacy means meeting the requirements of U.S. EPA, which includes the state's rules being as stringent as the federal rules. Under review of Indiana's drinking water rules, U.S. EPA has found the state's definition of "public water system" is not consistent with the federal definition. To correct this inconsistency, the state's definition of a public water system needs to add the words "an average of" before "at least twenty-five (25) individuals" to all definitions of "public water system". The locations of the definitions in need of correction are [327 IAC 8-1-3\(5\)](#), [327 IAC 8-2-1\(74\)](#), [327 IAC 8-4.1-1\(20\)](#), and [327 IAC 8-10-1\(16\)](#). The definitions of public water system at these citations are not exactly consistent with each other and the federal definition, and they are being revised in this rulemaking to be consistent with each other and the federal definition. In addition, U.S. EPA has requested that a requirement in [327 IAC 8-2.5-2\(b\)\(2\)](#) be more specifically worded to clarify that "plus GAC10" applies to enhanced coagulation as well as enhanced softening regarding the means of best available technology for disinfection byproduct.

[IC 13-14-9-4](#) Identification of Restrictions and Requirements Not Imposed under Federal Law

No element of the draft rule imposes either a restriction or a requirement on persons to whom the draft rule applies that is not imposed under federal law.

Potential Fiscal Impact

IDEM's Drinking Water Branch has been evaluating drinking water systems according to the federal definition so the rule change to add "an average of" to the state's definition will not cause a change in the manner of evaluating systems. Though there are no water systems expected to be affected by this rulemaking, as an explanation of a system that could be affected by the PWS definition with "an average of at least 25 individuals" instead of "at least 25 individuals", it would be a system that serves water to an average of 25 people at least 60 days of the year but does not have 25 or more people at each separate event. A possible situation would be a

church (of any religion) with 30 people on a once per week day of worship service and maybe 20 who attend a weekly prayer group meeting on a day other than the day of worship service. Overall, the water is not supplied to 25 people on at least 60 days, but, on average, water is supplied to 25 people on 104 days. For any system that might meet this criteria that was a church or not-for-profit serving fewer than 100 people, the fiscal impact on that system would be the \$100 drinking water fee (required under [IC 13-18-20.5-2](#)) because the system would qualify for the Small System Laboratory Assistance Program (SSLAP) and would be able to collect the required total coliform and nitrate samples for free through the Indiana State Department of Health. For a system in that size category that is not eligible for the SSLAP program, the system would pay the \$100 fee and collect an annual nitrate sample and between 4 and 12 total coliform samples per year. The system would start with quarterly sampling if it is not a seasonal system or collect monthly samples during the months of operation if it is a seasonal system. Sampling requirements could increase to monthly if the system misses collecting or analyzing the required samples or the system has positive sample results, meaning the result is beyond the accepted range. The cumulative number of missed samples or positive results in a 12-month period can trigger an increase to monthly sampling.

The amendment at [327 IAC 8-2.5-2\(b\)\(2\)](#) to add "plus GAC10" after enhanced coagulation is also requested by U.S. EPA and is for clarification that GAC10 treatment applies to enhanced coagulation as well as enhanced softening. There will be no change in the implementation of this requirement and, therefore, no fiscal impact because IDEM's Drinking Water Branch has been implementing this requirement that GAC10 treatment applies to both enhanced coagulation and enhanced softening.

Public Participation and Work Group Information

No work group is planned for the rulemaking. If you feel that a work group or other informal discussion on the rule is appropriate, please contact MaryAnn Stevens, Rules Development Branch, Office of Legal Counsel at (317) 232-8635 or (800) 451-6027 (in Indiana).

Small Business Assistance Information

IDEM established a compliance and technical assistance program (CTAP) under [IC 13-28-3](#). The program provides assistance to small businesses and information regarding compliance with environmental regulations. In accordance with [IC 13-28-3](#) and [IC 13-28-5](#), there is a small business assistance program ombudsman to provide a point of contact for small businesses affected by environmental regulations. Information on CTAP and other resources available can be found at:

www.in.gov/idem/ctap

For purposes of [IC 4-22-2-28.1](#), small businesses affected by this rulemaking may contact the Small Business Regulatory Coordinator:

Angela Taylor
IDEM Small Business Regulatory Coordinator/CTAP Small Business Liaison
IGCN 1316
100 North Senate Avenue
Indianapolis, IN 46204-2251
(317) 233-0572 or (800) 988-7901
ctap@idem.in.gov

For purposes of [IC 4-22-2-28.1](#), the Small Business Ombudsman designated by [IC 5-28-17-6](#) is:

Joseph Fagan
Small Business Ombudsman
Indiana Economic Development Corporation
One North Capitol, Suite 700
Indianapolis, IN 46204
(317) 586-3807
jfagan@iedc.in.gov

Resources available to regulated entities through the small business ombudsman include the ombudsman's duties stated in [IC 5-28-17-6](#), specifically [IC 5-28-17-6\(9\)](#), investigating and attempting to resolve any matter regarding compliance by a small business with a law, rule, or policy administered by a state agency, either as a party to a proceeding or as a mediator.

The Small Business Assistance Program Ombudsman is:

Erin Moorhous
IDEM Small Business Assistance Program Ombudsman/Business, Agricultural, and Legislative Liaison
IGCN 1301
100 North Senate Avenue
Indianapolis, IN 46204-2251
(317) 232-8921 or (800) 451-6027
emoorhou@idem.in.gov

FINDINGS

The commissioner of IDEM has prepared written findings regarding rulemaking on amending the definition of "public water system". These findings are prepared under [IC 13-14-9-7](#) and are as follows:

- (1) Under review of Indiana's drinking water rules, U.S. EPA has found the state's definition of "public water system" is not consistent with the federal definition. To correct this inconsistency, the state's definition of a public water system needs to add the words "an average of" before "at least twenty-five (25) individuals" to all definitions of "public water system". The locations of the definitions in need of correction are [327 IAC 8-1-3\(5\)](#), [327 IAC 8-2-1\(74\)](#), [327 IAC 8-4.1-1\(20\)](#), and [327 IAC 8-10-1\(16\)](#).
- (2) Under review of Indiana's drinking water rules, U.S. EPA has found that a requirement in [327 IAC 8-2.5-2\(b\)\(2\)](#) needs to be more specifically worded to clarify that "plus GAC10" applies to enhanced coagulation as well as enhanced softening regarding the means of best available technology for disinfection byproduct.
- (3) Conformance of Indiana's drinking water rules with the federal definition of "public water system" and the requirement of GAC10 to apply both to enhanced coagulation and enhanced softening is necessary to maintain IDEM's primacy to conduct the drinking water programs under the SDWA in Indiana.
- (4) I have determined that under the specific circumstances pertaining to this rule, the rulemaking policy alternatives are so limited that the public notice and comment period provided in the notice of first public comment period would provide no substantial benefit to the environment or to persons to be regulated or otherwise affected by the rule.
- (5) The draft rule is hereby incorporated into these findings.

Bruno L. Pigott
Commissioner
Indiana Department of Environmental Management

REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Comments may be submitted in one of the following ways:

- (1) By mail or common carrier to the following address:

LSA Document #21-132 (PWS Definition)
MaryAnn Stevens
Rules Development Branch
Office of Legal Counsel
Indiana Department of Environmental Management
Indiana Government Center North
100 North Senate Avenue
Indianapolis, IN 46204-2251

- (2) By electronic mail to mstevens@idem.in.gov. To confirm timely delivery of submitted comments, please request a document receipt when sending the electronic mail. **PLEASE NOTE: Electronic mail comments will NOT be considered part of the official written comment period unless they are sent to the address indicated in this notice.**

Contact Karla Kindrick at kkindrick@idem.in.gov or 317-232-8922 if a different method of submitting comments by the comment period deadline is desired.

Regardless of the delivery method used, to properly identify each comment with the rulemaking action it is intended to address, each comment document must clearly specify the LSA document number of the rulemaking.

COMMENT PERIOD DEADLINE

All comments must be postmarked or time stamped not later than May 14, 2021.

Additional information regarding this action may be obtained from MaryAnn Stevens, Rules Development Branch, Office of Legal Counsel, (317) 232-8635 or (800) 451-6027 (in Indiana).

DRAFT RULE

SECTION 1. [327 IAC 8-1-3](#) IS AMENDED TO READ AS FOLLOWS:

[327 IAC 8-1-3](#) Definitions

Authority: [IC 13-14-8](#); [IC 13-14-9](#); [IC 13-15-1-2](#); [IC 13-15-2-1](#); [IC 13-18-3-1](#); [IC 13-18-4-1](#)

Affected: [IC 13-11-2](#); [IC 13-13-5-1](#); [IC 13-18-2](#)

Sec. 3. In addition to the definitions in [IC 13-11-2](#), the following definitions apply throughout this rule:

- (1) "Direct additives" means additives that are used in public water systems for the treatment of raw water

~~Direct additives are also used~~ and to protect drinking water during storage and distribution. Examples of direct additives include the following:

- (A) Agents used for coagulation and flocculation.
 - (B) Corrosion and scale control.
 - (C) Softening.
 - (D) Sequestering.
 - (E) Precipitation.
 - (F) pH adjustment.
 - (G) Disinfection and oxidation.
 - (H) Miscellaneous treatment applications.
 - (I) Miscellaneous water supply products.
- (2) "Entry point to the distribution system" means one (1) of the following points:
- (A) In public water systems that utilize water treatment facilities, the point at which the drinking water has left the treatment facilities and has entered the water distribution system.
 - (B) In public water systems that do not utilize water treatment facilities, the point at which the drinking water has left the supply facilities and has entered the water distribution system.
- (3) "Indirect additives" means additives that are materials or equipment that come in contact with drinking water or come in contact with drinking water direct additives. Examples of indirect additives include the following:
- (A) Pipes.
 - (B) Valves and related products.
 - (C) Barrier materials.
 - (D) Joining and sealing materials.
 - (E) Protective materials and related products.
 - (F) Mechanical devices used in treatment, transmission, and distribution systems.
- (4) "Operator" means the person in direct or responsible charge and supervising the operation of a:
- (A) water treatment plant;
 - (B) wastewater treatment plant; or
 - (C) water distribution system.
- (5) "Public water system" or "PWS":
- (A) means a ~~system~~ **public water supply** for the provision to the public of water for human consumption through pipes or other constructed conveyances, if ~~such the~~ system:
 - (i) has at least fifteen (15) service connections; or
 - (ii) regularly serves **an average of** at least twenty-five (25) individuals ~~The term~~ **daily at least sixty (60) days out of the year;**
 - (B) includes any:
 - (i) collection, treatment, storage, and distribution facilities under control of the operator of the system and used primarily in connection with the system; and ~~any~~
 - (ii) collection or pretreatment storage facilities not under ~~such the~~ **operator's** control that are used primarily in connection with the system; **and**
 - (C) **is either a CWS or an NCWS, as defined in [327 IAC 8-2-1\(12\)](#) and [327 IAC 8-2-1\(63\)](#).**

(Water Pollution Control Division; [327 IAC 8-1-3](#); filed Mar 31, 1999, 1:50 p.m.: 22 IR 2492; filed Mar 6, 2000, 7:56 a.m.: 23 IR 1622; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; filed Apr 24, 2006, 3:00 p.m.: 29 IR 2947; readopted filed Jul 18, 2012, 2:25 p.m.: [20120815-IR-327120261BFA](#); readopted filed Jun 6, 2018, 1:59 p.m.: [20180704-IR-327180171BFA](#))

SECTION 2. [327 IAC 8-2-1](#) IS AMENDED TO READ AS FOLLOWS:

[327 IAC 8-2-1](#) Definitions

Authority: [IC 13-13-5](#); [IC 13-14-8-7](#); [IC 13-14-9](#); [IC 13-18-3](#); [IC 13-18-16](#)

Affected: [IC 13-11-2](#); [IC 13-18](#)

Sec. 1. In addition to the definitions contained in [IC 13-11-2](#) and ~~[327 IAC 1](#)~~, [327 IAC 8-1](#), the following definitions apply throughout this rule, [327 IAC 8-2.1](#), [327 IAC 8-2.3](#), [327 IAC 8-2.5](#), and [327 IAC 8-2.6](#):

- (1) "Act" means the Safe Drinking Water Act (42 U.S.C. 300f et seq.).
- (2) "Action level" means the concentration of lead or copper in water specified in section 36(c) of this rule that determines, in some cases, the treatment requirements contained in sections 36 through 47 of this rule that a water system is required to complete.
- (3) "Adjustment program" means the addition of fluoride to drinking water by a PWS for the prevention of

dental cavities.

(4) "Administrator" means the administrator of the U.S. EPA.

(5) "Bag filters" means pressure-driven separation devices that remove particulate matter larger than one (1) micrometer (μm) using an engineered porous filtration media. They are typically constructed of a nonrigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to the outside.

(6) "Bank filtration" means a water treatment process that uses a well to recover surface water that has naturally infiltrated into ground water through a river bed or bank. Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other well.

(7) "Best available technology" or "BAT" means best technology, treatment techniques, or other means that the commissioner finds are available, after examination for efficacy under field conditions, and not solely under laboratory conditions, and after taking cost into consideration. For the purpose of setting MCLs for synthetic organic chemicals, any BAT must be at least as effective as granular activated carbon.

(8) "Cartridge filters" means pressure-driven separation devices that remove particulate matter larger than one (1) micrometer (μm) using an engineered porous filtration media. They are typically constructed as rigid or semirigid, self-supporting filter elements housed in pressure vessels in which the flow is from the outside of the cartridge to the inside.

(9) "Coagulation" means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.

(10) "Combined distribution system" means the interconnected distribution system consisting of the distribution system of wholesale systems and of the consecutive systems that receive finished water.

(11) "Commissioner" means the commissioner of the Indiana department of environmental management or the designated agent of the commissioner.

(12) "Community water system" or "CWS" means a PWS that serves at least fifteen (15) service connections used by year-round residents or regularly serves at least twenty-five (25) year-round residents.

(13) "Compliance cycle" means the nine (9) year calendar year cycle during which PWSs must monitor. Each compliance cycle consists of three (3) three-year compliance periods **that continue in perpetuity. The first compliance cycle is established** according to the following:

(A) The first calendar year cycle begins January 1, 1993, and ends December 31, 2001.

(B) The second calendar year cycle begins January 1, 2002, and ends December 31, 2010.

(C) The third calendar year cycle begins January 1, 2011, and ends December 31, 2019.

(14) "Compliance period" means a three (3) year calendar year period within a compliance cycle. Each compliance cycle has three (3) three-year compliance periods. ~~according to~~ The following **shows the compliance periods within the compliance cycles shown as an example in subdivision (13):**

(A) Within the first compliance cycle, the compliance periods are as follows:

(i) The first compliance period runs from January 1, 1993, to December 31, 1995.

(ii) The second compliance period runs from January 1, 1996, to December 31, 1998.

(iii) The third compliance period runs from January 1, 1999, to December 31, 2001.

(B) Within the second compliance cycle, the compliance periods are as follows:

(i) The first compliance period runs from January 1, 2002, to December 31, 2004.

(ii) The second compliance period runs from January 1, 2005, to December 31, 2007.

(iii) The third compliance period runs from January 1, 2008, to December 31, 2010.

(C) Within the third compliance cycle, the compliance periods are as follows:

(i) The first compliance period runs from January 1, 2011, to December 31, 2013.

(ii) The second compliance period runs from January 1, 2014, to December 31, 2016.

(iii) The third compliance period runs from January 1, 2017, to December 31, 2019.

(15) "Comprehensive performance evaluation" or "CPE" means a thorough review and analysis of a treatment plant's performance-based capabilities and associated administrative, operation, and maintenance practices. It is conducted to identify factors that may be adversely impacting a plant's capability to achieve compliance and emphasizes approaches that can be implemented without significant capital improvements. For purposes of compliance with [327 IAC 8-2.6-1](#), the CPE must consist of at least the following components:

(A) Assessment of plant performance.

(B) Evaluation of major unit processes.

(C) Identification and prioritization of performance limiting factors.

(D) Assessment of the applicability of comprehensive technical assistance.

(E) Preparation of a CPE report.

(16) "Confluent growth" means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion thereof, in which bacterial colonies are not discrete.

(17) "Consecutive system" means a PWS that receives some or all of its finished water from one (1) or more wholesale systems. Delivery can be through a direct connection or through the distribution system of one (1) or more consecutive systems.

(18) "Contaminant" means any:

- (A) microorganisms;
- (B) chemicals;
- (C) waste;
- (D) physical substance;
- (E) radiological substance; or
- (F) wastewater;

introduced or found in the drinking water.

(19) "Conventional filtration treatment" means a series of processes, including:

- (A) coagulation;
- (B) flocculation;
- (C) sedimentation; and
- (D) filtration;

resulting in substantial particulate removal.

(20) "Corrosion inhibitor" means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

(21) "CT" or "CTcalc" means the product of residual disinfectant concentration (C) in milligrams per liter determined before or at the first customer and the corresponding disinfectant contact time (T) in minutes, such as $C \times T$. If a PWS applies disinfectants at more than one (1) point prior to the first customer, the PWS must determine the CT of each disinfectant sequence before or at the first customer to determine the total percent inactivation or total inactivation ratio. In determining the total inactivation ratio, the PWS must determine the residual disinfectant concentration of each disinfection sequence and corresponding contact time before any subsequent disinfection application point. $CT_{99.9}$ is the CT value required for ninety-nine and nine-tenths percent (99.9%) (3-log) inactivation of *Giardia lamblia* cysts. $CT_{99.9}$ for a variety of disinfectants and conditions appears in Tables 1.1-1.6, 2.1, and 3.1 of 40 CFR 141.74(b)(3).

$$\frac{CT_{calc}}{CT_{99.9}}$$

is the inactivation ratio. The sum of the inactivation ratios or total inactivation ratio shown as:

$$\sum \frac{(CT_{calc})}{(CT_{99.9})}$$

is calculated by adding together the inactivation ratio for each disinfection sequence. A total inactivation ratio equal to or greater than one (1.0) is assumed to provide a 3-log inactivation of *Giardia lamblia* cysts.

(22) "Diatomaceous earth filtration" means a process resulting in substantial particulate removal in which:

- (A) a precoat cake of diatomaceous earth filter media is deposited on a support membrane (septum); and
- (B) while the water is filtered by passing through the cake on the septum, additional filter media known as body feed are continuously added to the feed water to maintain the permeability of the filter cake.

(23) "Direct filtration" means a series of processes, including coagulation and filtration but excluding sedimentation, resulting in substantial particulate removal.

(24) "Disinfectant" means any oxidant, including, but not limited to:

- (A) chlorine;
- (B) chlorine dioxide;
- (C) chloramines; and

- (D) ozone;
added to water in any part of the treatment or distribution process that is intended to kill or inactivate pathogenic microorganisms.
- (25) "Disinfectant contact time" or "T in CT calculations" means the time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration (C) is measured. Where only one (1) C is measured, T is the time in minutes that it takes for water to move from the point of disinfectant application to a point before or at where C is measured. Where more than one (1) C is measured, T is:
- (A) for the first measurement of C, the time in minutes that it takes for water to move from the first or only point of disinfectant application to a point before or at the point where the first C is measured; and
 - (B) for subsequent measurements of C, the time in minutes that it takes for water to move from the previous C measurement point to the C measurement point for which the particular T is being calculated.
- Disinfectant contact time in pipelines must be calculated based on plug flow by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. Disinfectant contact time within mixing basins and storage reservoirs must be determined by tracer studies or an equivalent demonstration.
- (26) "Disinfection" means a process that inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.
- (27) "Disinfection profile" means a summary of daily *Giardia lamblia* inactivation through a treatment plant. The procedure for developing a disinfection profile is contained in:
- (A) [327 IAC 8-2.6-2](#) for systems serving at least ten thousand (10,000) individuals; and
 - (B) [327 IAC 8-2.6-2.1](#) for systems serving fewer than ten thousand (10,000) individuals.
- (28) "Domestic or other nondistribution system plumbing problem" means a coliform contamination problem in a PWS with more than one (1) service connection that is limited to the specific service connection from which the coliform-positive sample was taken.
- (29) "Dose equivalent" means the product of the absorbed dose from ionizing radiation and ~~such~~ **that** factors as **that** account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRUM).
- (30) "Drinking water violation" means violations of the:
- (A) MCL;
 - (B) treatment technique (TT);
 - (C) monitoring requirements; and
 - (D) testing procedures;
- in this rule. [327 IAC 8-2.1-16](#) identifies the tier assignment for each specific violation or situation requiring a public notice.
- (31) "Dual sample set" means a set of two (2) samples collected at the same time and at the same location, with one (1) sample analyzed for TTHM and the other sample analyzed for HAA5. Dual sample sets are collected under [327 IAC 8-2.5-10](#) through [327 IAC 8-2.5-20](#).
- (32) "Effective corrosion inhibitor residual" means a concentration sufficient to form a passivating film on the interior walls of a pipe for the purpose of sections 36 through 47 of this rule only.
- (33) "Enhanced coagulation" means the addition of sufficient coagulant for improved removal of disinfection byproduct precursors by conventional filtration treatment.
- (34) "Enhanced softening" means the improved removal of disinfection byproduct precursors by precipitative softening.
- (35) "Filter profile" means a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.
- (36) "Filtration" means a process for removing particulate matter from water by passage through porous media.
- (37) "Finished water" means water that is:
- (A) introduced into the distribution system of a PWS; and
 - (B) intended for distribution and consumption without further treatment, except treatment necessary to maintain water quality in the distribution system (for example, booster disinfection or addition of corrosion control chemicals).
- (38) "First draw sample" means a one (1) liter sample of tap water collected in accordance with section 37 of this rule that:
- (A) has been standing in the plumbing pipes at least six (6) hours; and
 - (B) is collected without flushing the tap.
- (39) "Flocculation" means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.
- (40) "Flowing stream" means a course of running water flowing in a definite channel.
- (41) "GAC10" means granular activated carbon filter beds with an empty-bed contact time of ten (10) minutes

based on average daily flow and a carbon reactivation frequency of every:

(A) one hundred eighty (180) days; or

(B) one hundred twenty (120) days when the carbon reactivation frequency for GAC10 is used as a BAT for compliance with MCLs under [327 IAC 8-2.5-2\(b\)](#).

(42) "GAC20" means granular activated carbon filter beds with an empty-bed contact time of twenty (20) minutes based on average daily flow and a carbon reactivation frequency of every two hundred forty (240) days.

(43) "Gross alpha particle activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

(44) "Gross beta particle activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

(45) "Ground water under the direct influence of surface water" means any water beneath the surface of the ground with:

(A) significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia* or, for Subpart H systems serving at least ten thousand (10,000) individuals and beginning January 1, 2005, systems serving fewer than ten thousand (10,000) individuals, *Cryptosporidium*; or

(B) significant and relatively rapid shifts in water characteristics, such as:

(i) turbidity;

(ii) temperature;

(iii) conductivity; or

(iv) pH;

that closely correlate to climatological or surface water conditions.

Direct influence must be determined for individual sources in accordance with criteria established by the commissioner. The commissioner's determination of direct influence may be based on site-specific measurements of water quality or documentation of well construction characteristics and geology with field evaluation, or both.

(46) "Haloacetic acids (five)" or "HAA5" means the sum of the concentrations in milligrams per liter of the haloacetic acid compounds:

(A) monochloroacetic acid;

(B) dichloroacetic acid;

(C) trichloroacetic acid;

(D) monobromoacetic acid; and

(E) dibromoacetic acid;

rounded to two (2) significant figures after addition.

(47) "Halogen" means one (1) of the following chemical elements:

(A) Chlorine.

(B) Bromine.

(C) Iodine.

(48) "Initial compliance period" means January 1993 to December 1995 for the contaminants listed in the following:

(A) Section 4 of this rule, other than the following:

(i) Arsenic.

(ii) Barium.

(iii) Cadmium.

(iv) Fluoride.

(v) Lead.

(vi) Mercury.

(vii) Selenium.

(viii) Silver.

(B) Section 5 of this rule.

(C) Section 5.4(a) of this rule, other than the following:

(i) Benzene.

(ii) Vinyl chloride.

(iii) Carbon tetrachloride.

(iv) 1,2-dichloroethane.

(v) Trichloroethylene.

(vi) 1,1-dichloroethylene.

(vii) 1,1,1-trichloroethane.

(viii) para-dichlorobenzene.

(49) "Lake/reservoir" means a natural or manmade basin or hollow on the earth's surface in which water collects or is stored that can or cannot have a current or single direction of flow.

(50) "Large water system" means a water system that serves more than fifty thousand (50,000) people for the purpose of sections 36 through 47 of this rule only.

(51) "Lead service line" means a service line made of lead that connects the water main to the building inlet and any:

- (A) lead pigtail;
- (B) gooseneck; or
- (C) other fitting;

that is connected to the lead line.

(52) "Legionella" means a genus of bacteria, some species of which have caused a type of pneumonia called Legionnaires Disease.

(53) "Locational running annual average" or "LRAA" means the average of sample analytical results for samples taken at a particular monitoring location during the previous four (4) calendar quarters.

(54) "Manmade beta particle and photon emitters" means all radionuclides emitting:

- (A) beta particle;
- (B) photons; or
- (C) both clauses (A) and (B);

listed in "Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure", NBS Handbook 69, as amended August 1973**, U.S. Department of Commerce, except the daughter products of thorium-232, uranium-235, and uranium-238.

(55) "Maximum contaminant level" or "MCL" means the maximum permissible level of a contaminant in water that is delivered to the free flowing outlet of the ultimate user of a PWS, except in the case of turbidity where the maximum permissible level is measured at the point of entry to the distribution system. The term does not include contaminants added to the water under circumstances controlled by the user, except those resulting from corrosion of piping and plumbing caused by water quality.

(56) "Maximum contaminant level goal" or "MCLG" means the maximum level of a contaminant in drinking water:

- (A) at which no known or anticipated adverse effect on the health of persons would occur; and
- (B) that includes an adequate margin of safety.

(57) "Maximum residual disinfectant level" or "MRDL" means a level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.

(58) "Maximum residual disinfectant level goal" or "MRDLG" means the maximum level of a disinfectant added for water treatment:

- (A) at which no known or anticipated adverse effect on the health of individuals would occur; and
- (B) that allows an adequate margin of safety.

(59) "Maximum total trihalomethane potential" or "MTP" means the maximum concentration of TTHM produced in a given water containing a disinfectant residual after seven (7) days at a temperature of twenty-five (25) degrees Celsius or above.

(60) "Medium size water system" means a water system that serves greater than three thousand three hundred (3,300) and less than or equal to fifty thousand (50,000) persons for the purpose of sections 36 through 47 of this rule only.

(61) "Membrane filtration" means the following:

- (A) A pressure or vacuum driven separation process in which:
 - (i) particulate matter larger than one (1) micrometer (μm) is rejected by an engineered barrier, primarily through a size-exclusion mechanism; and
 - (ii) a measurable removal efficiency of a target organism can be verified through the application of a direct integrity test.
- (B) The term includes the common membrane technologies of:
 - (i) microfiltration;
 - (ii) ultrafiltration;
 - (iii) nanofiltration; and
 - (iv) reverse osmosis.

(62) "Near the first service connection" means at one (1) of the twenty percent (20%) of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.

(63) "Noncommunity water system" or "NCWS" means a PWS that:

- (A) has at least fifteen (15) service connections used by nonresidents; or
- (B) regularly serves twenty-five (25) or more nonresident individuals daily for at least sixty (60) days per year.

(64) "Nontransient noncommunity water system" or "NTNCWS" means a PWS that is not a CWS that regularly serves the same twenty-five (25) or more persons at least six (6) months per year.

- (65) "Optimal corrosion control treatment" means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while ensuring that the treatment does not cause the water system to violate this article for the purpose of sections 36 through 47 of this rule only.
- (66) "Performance evaluation sample" or "PE sample" means a reference sample provided to a laboratory for the purpose of demonstrating that the laboratory can successfully analyze the sample within limits of performance specified by the administrator. The true value of the concentration of the reference material is unknown to the laboratory at the time of the analysis.
- (67) "Picocuri" or "pCi" means the quantity of radioactive material producing two and twenty-two hundredths (2.22) nuclear transformations per minute.
- (68) "Plant intake" means the works or structures at the head of a conduit through which water is diverted from a source, for example, a river or lake, into a treatment plant.
- (69) "Point of disinfectant application" means the point where:
- (A) the disinfectant is applied; and
 - (B) water downstream of that point is not subject to recontamination by surface water runoff.
- (70) "Point-of-entry treatment device" or "POE" means a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in drinking water distributed throughout the house or building.
- (71) "Point-of-use treatment device" or "POU" means a treatment device to a single tap used for the purpose of reducing contaminants in drinking water at that one (1) tap.
- (72) "Presedimentation" means a preliminary treatment process used to remove:
- (A) gravel;
 - (B) sand; and
 - (C) other particulate material;
- from the source water through settling before the water enters the primary clarification and filtration processes in a treatment plant.
- (73) "Primacy agency" means the department of environmental management where the department exercises primary enforcement responsibility as granted by the EPA.
- (74) "Public water system" or "PWS":
- (A) means a public water supply for the provision to the public of water for human consumption through pipes or other constructed conveyances, if the system:
 - (i) has at least fifteen (15) service connections; or
 - (ii) regularly serves **an average of** at least twenty-five (25) individuals daily at least sixty (60) days out of the year; ~~The term~~
 - (B) includes any:
 - (A) (i) collection, treatment, storage, and distribution facilities under control of the operator of the system and used primarily in connection with the system; and
 - (B) (ii) collection or pretreatment storage facilities not under ~~such~~ **the operator's** control that are used primarily in connection with the system; ~~A PWS and~~
 - (C) is either a CWS or an NCWS, as defined in subdivisions (12) and (63).
- (75) "Rem" means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A millirem (mrem) is one-thousandth (1/1,000) of a rem.
- (76) "Repeat compliance period" means any subsequent compliance period after the initial compliance period.
- (77) "Residual disinfectant concentration" or "C in CT calculations" means the concentration of disinfectant measured in milligrams per liter in a representative sample of water.
- (78) "Sanitary survey" means an onsite review of the:
- (A) water source;
 - (B) facilities;
 - (C) equipment;
 - (D) operation; and
 - (E) maintenance;
- of a PWS for the purpose of evaluating the adequacy of clauses (A) through (E) for producing and distributing safe drinking water.
- (79) "Sedimentation" means a process for removal of solids before filtration by gravity or separation.
- (80) "Service interruption" means a disturbance in the provision of water to a customer affecting quality or quantity.
- (81) "Service line sample" means a one (1) liter sample of water collected in accordance with section 37(b)(3) of this rule that has been standing at least six (6) hours in a service line.
- (82) "Single family structure" means a building constructed as a single family residence that is currently being used as a:
- (A) residence; or
 - (B) place of business;

for the purpose of sections 36 through 47 of this rule only.

(83) "Slow sand filtration" means a process:

- (A) involving passage of raw water through a bed of sand at low velocity (generally less than four-tenths (0.4) meter per hour or forty-five (45) to one hundred fifty (150) gallons per day per square foot); and
- (B) resulting in substantial particulate removal by physical and biological mechanisms.

(84) "Small water system" means a water system that serves three thousand three hundred (3,300) persons or fewer for the purpose of sections 36 through 47 of this rule only.

(85) "Standard sample" means the aliquot of finished drinking water that is examined for the presence of coliform bacteria.

(86) "Subpart H system" means a PWS using:

- (A) surface water; or
- (B) ground water under the direct influence of surface water;

as a source that is subject to [327 IAC 8-2.6](#).

(87) "Supplier of water" means any person who:

- (A) owns;
- (B) operates; or
- (C) both owns and operates;

a PWS.

(88) "Surface water" means all water occurring on the surface of the ground, including water in the following:

- (A) A stream.
- (B) Natural and artificial lakes.
- (C) Ponds.
- (D) Swales.
- (E) Marshes.
- (F) Diffused surface water.

(89) "SUVA" means specific ultraviolet absorption at two hundred fifty-four (254) nanometers, an indicator of the humic content of water. SUVA is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of two hundred fifty-four (254) nanometers (UV_{254}) (in m^{-1}) by its concentration of dissolved organic carbon (DOC) (in milligrams per liter).

(90) "System with a single service connection" means a PWS that supplies drinking water to consumers via a single service line.

(91) "Too numerous to count" means that the total number of bacterial colonies exceeds two hundred (200) on a forty-seven (47) millimeter diameter membrane filter used for coliform detection.

(92) "Total organic carbon" or "TOC" means total organic carbon in milligrams per liter, measured using:

- (A) heat;
- (B) oxygen;
- (C) ultraviolet irradiation;
- (D) chemical oxidants; or
- (E) combinations of these oxidants in clauses (A) through (D);

that convert organic carbon to carbon dioxide, rounded to two (2) significant figures.

(93) "Total trihalomethanes" or "TTHM" means the sum of the concentration in milligrams per liter of the THM compounds:

- (A) trichloromethane (chloroform);
- (B) dibromochloromethane;
- (C) bromodichloromethane; and
- (D) tribromomethane (bromoform);

rounded to two (2) significant figures.

(94) "Transient noncommunity water system" or "TWS" means an NCWS that does not regularly serve at least twenty-five (25) of the same persons over six (6) months per year.

(95) "Trihalomethane" or "THM" means one (1) of the family of organic compounds, named as derivatives of methane, wherein three (3) of the four (4) hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.

(96) "Two-stage lime softening" means a process in which chemical addition and hardness precipitation occur in each of two (2) distinct unit clarification processes in series prior to filtration.

(97) "Uncovered finished water storage facility" means a facility:

- (A) such as:
 - (i) a tank;
 - (ii) a reservoir; or
 - (iii) another facility;

open to the atmosphere that is used to store water that will undergo no further treatment to reduce microbial pathogens except residual disinfection; and

- (B) that is directly open to the atmosphere.
- (98) "Undetectable disinfectant residual" means a disinfectant residual level that is less than:
- (A) two-tenths (0.2) milligram per liter measured as free chlorine;
 - (B) five-tenths (0.5) milligram per liter measured as combined chlorine (chloramines); or
 - (C) one-tenth (0.1) milligram per liter measured as chlorine dioxide.
- The commissioner may require a system to demonstrate the level of chloramines present when measured as combined chlorine under clause (B).
- (99) "U.S. EPA" or "EPA" means the United States Environmental Protection Agency.
- (100) "Virus" means a virus of fecal origin that is infectious to humans by waterborne transmission.
- (101) "Waterborne disease outbreak" means the significant occurrence of acute infectious illness epidemiologically associated with the ingestion of water from a PWS that is deficient in treatment as determined by the commissioner.
- (102) "Water loss" means the following:
- (A) A calculation based on the difference between the following:
 - (i) The amount of water produced or purchased.
 - (ii) The annual volume of water metered, including unmetered water taken by the following:
 - (AA) Customers authorized to take water.
 - (BB) The water system.
 - (CC) Others authorized to take water.
 - (B) Inclusions of the following:
 - (i) Unauthorized consumption.
 - (ii) Metering inaccuracies.
 - (iii) Data handling errors.
 - (iv) Leaks, breaks, and overflows on the following:
 - (AA) Mains.
 - (BB) Service reservoirs.
 - (CC) Service connections up to the point of customer metering.
- (103) "Wholesale system" means a PWS that:
- (A) treats source water as necessary to produce finished water; and
 - (B) delivers some or all of that finished water to another PWS.
- Delivery can be through a direct connection or through the distribution system of one (1) or more consecutive systems.

***This document is incorporated by reference. Copies may be obtained from the Government Publishing Office, www.gpo.gov, or are available for review at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Thirteenth Floor, Indianapolis, Indiana 46204.**

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(Water Pollution Control Division; [327 IAC 8-2-1](#); filed Sep 24, 1987, 3:00 p.m.: 11 IR 705; filed Dec 28, 1990, 5:10 p.m.: 14 IR 1003; errata filed Jan 9, 1991, 2:30 p.m.: 14 IR 1070; errata filed Aug 6, 1991, 3:45 p.m.: 14 IR 2258; filed Apr 12, 1993, 11:00 a.m.: 16 IR 2151; filed Aug 24, 1994, 8:15 a.m.: 18 IR 19; errata filed Oct 11, 1994, 2:45 p.m.: 18 IR 531; filed Oct 24, 1997, 4:30 p.m.: 21 IR 932; filed Mar 6, 2000, 7:56 a.m.: 23 IR 1623; filed Nov 20, 2001, 10:20 a.m.: 25 IR 1075; filed May 1, 2003, 12:00 p.m.: 26 IR 2808; filed Jun 13, 2005, 2:30 p.m.: 28 IR 3184; filed May 7, 2010, 9:30 a.m.: [20100602-IR-327080198FRA](#); errata filed May 26, 2017, 2:28 p.m.: [20170607-IR-327170275ACA](#))

SECTION 3. [327 IAC 8-2.5-2](#) IS AMENDED TO READ AS FOLLOWS:

[327 IAC 8-2.5-2](#) Maximum contaminant levels; disinfection byproducts

Authority: [IC 13-13-5-1](#); [IC 13-14-8-2](#); [IC 13-14-8-7](#); [IC 13-18-3-2](#)

Affected: [IC 13-12-3-1](#); [IC 13-13-5-2](#); [IC 13-14-9](#); [IC 13-18-11](#)

Sec. 2. (a) The MCLs for disinfection byproducts are as follows:

Disinfection Byproduct	MCL (mg/L)
------------------------	------------

TTHM	0.080
HAA5	0.060
Bromate	0.010
Chlorite	1.0

(1) Subpart H systems shall comply with this subsection according to the following:

(A) Beginning January 1, 2002, for a system serving ten thousand (10,000) or more persons.

(B) Beginning January 1, 2004, for systems serving fewer than ten thousand (10,000) persons and systems using only ground water not under the direct influence of surface water.

(2) The commissioner hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the MCLs for disinfection byproducts identified in this subsection:

Disinfection Byproduct	Best Available Technology
TTHM	Enhanced coagulation or enhanced softening, or GAC10, with chlorine as the primary and residual disinfectant.
HAA5	Enhanced coagulation or enhanced softening, or GAC10, with chlorine as the primary and residual disinfectant.
Bromate	Control of ozone treatment process to reduce production of bromate.
Chlorite	Control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels.

(b) This subsection relates to LRAA compliance under sections 11 through 20 of this rule. The MCLs for TTHM and HAA5 are as follows:

Disinfection Byproduct	MCL (mg/L)
TTHM	0.080
HAA5	0.060

(1) The MCLs for TTHM and HAA5 must be complied with as a LRAA at each monitoring location beginning at the date specified for compliance in section 11(c) of this rule.

(2) The commissioner hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the MCLs for TTHM and HAA5 identified in this subsection for all systems that disinfect their source water:

Disinfection Byproduct	Best Available Technology
TTHM and HAA5	Enhanced coagulation or plus GAC10 , enhanced softening plus GAC10, or nanofiltration with a molecular weight cutoff less than or equal to one thousand (1,000) Daltons, or GAC20.

(3) The commissioner hereby identifies the following as the BAT, treatment techniques, or other means available for achieving compliance with the MCLs for TTHM and HAA5 identified in this subsection for consecutive systems and applies only to the disinfected water that consecutive systems buy or otherwise receive:

Disinfection Byproduct	Best Available Technology
TTHM and HAA5	Systems serving greater than or equal to ten thousand (10,000): Improved distribution system and storage tank management to reduce residence time, plus the use of chloramines for disinfectant residual maintenance. Systems serving less than ten thousand (10,000): Improved distribution system and storage tank maintenance to reduce residence time.

(Water Pollution Control Division; [327 IAC 8-2.5-2](#); filed May 1, 2003, 12:00 p.m.: 26 IR 2840; filed May 7, 2010, 9:30 a.m.: [20100602-IR-327080198FRA](#); errata filed May 26, 2017, 2:28 p.m.: [20170607-IR-327170275ACA](#))

SECTION 4. [327 IAC 8-4.1-1](#) IS AMENDED TO READ AS FOLLOWS:

[327 IAC 8-4.1-1](#) Definitions

Authority: [IC 13-14-8](#); [IC 13-18-3](#); [IC 13-18-17-6](#)

Affected: [IC 13-11-2-43](#); [IC 13-13-2](#); [IC 13-18](#); [IC 15-16-4](#); [IC 15-16-5](#); [IC 25-17.6-1](#); [IC 25-39-4](#)

Sec. 1. In addition to the definition in [IC 13-11-2-43](#), the following definitions apply throughout this rule:

(1) "Aquifer" means an underground geological formation that has the ability to receive, store, and transmit water in amounts sufficient for the satisfaction of any beneficial use.

(2) "Best management practices" means schedules of activities, prohibitions of practice, treatment

requirements, operation and maintenance procedures, use of containment facilities, and other management practices to prevent or reduce the pollution of waters of the state.

(3) "Calibration" means the process of refining the model representation of the hydrogeologic framework, hydraulic properties, and boundary conditions to achieve a desired degree of correspondence between the model simulation and observations of the ground water flow system.

(4) "Certified professional geologist" means a professional geologist certified by the state of Indiana under [IC 25-17-6-1](#).

(5) "Community public water supply system", "**community water system**", or "CPWSS", or "**CWS**" means a public water supply system that serves at least fifteen (15) service connections used by year-round residents or regularly serves at least twenty-five (25) year-round residents.

(6) "Conceptual model" means a description of the hydrogeologic system that represents the movement of ground water, for example:

- (A) geologic and hydrologic framework;
- (B) media type;
- (C) physical processes;
- (D) hydraulic properties; and
- (E) water budget.

(7) "Confined aquifer" means an aquifer in which ground water is confined under pressure that is significantly greater than atmospheric pressure.

(8) "Critical water users" means water users whose immediate health or welfare would be affected in an adverse manner if water use is denied.

(9) "Customers" means number of persons served by the public water supply system.

(10) "Delineation" means a process used to define boundaries of the wellhead protection area.

(11) "Department" means the department of environmental management created under [IC 13-13-2](#).

(12) "Emergency condition" means a condition related to ground water contamination which threatens to disrupt water supply service from a community public water supply system wellfield.

(13) "Hydrogeology" means the study of the geology of ground water, with particular emphasis on the chemistry and movement of water.

(14) "Hydrostratigraphic unit" means a grouping of geologic units of similar hydrogeologic properties, for example, aquifers and confining units.

(15) "Large community public water supply system" means a public water supply system serving greater than fifty thousand (50,000) customers.

(16) "Medium community public water supply system" means a public water supply system serving from three thousand three hundred one (3,301) up to and including fifty thousand (50,000) customers.

(17) "Model" means an investigative technique using a mathematical or physical representation of a system or theory that accounts for all or some of its known properties.

(18) "Pesticide review board" means the Indiana pesticide review board created by [IC 15-16-4](#) to collect, analyze, and interpret information on matters relating to the use of pesticides.

(19) "Potential source of contamination" means a facility, site, practice, or activity that possesses the ability to contaminate ground water.

(20) "Public water supply system", "**public water system**", or "PWSS", or "**PWS**":

(A) means a public water supply for the provision to the public of water for human consumption through pipes or other constructed conveyances, if ~~such~~ **the** system:

(i) has at least fifteen (15) service connections; or

(ii) regularly serves **an average** of at least twenty-five (25) individuals daily at least sixty (60) days out of the year; ~~The term~~

(B) includes any:

(i) collection, treatment, storage, and distribution facilities under control of the operator of ~~such~~ **the** system and used primarily in connection with ~~such~~ **the** system; and ~~any~~

(ii) collection or pretreatment storage facilities not under ~~such~~ **the operator's** control that are used primarily in connection with ~~such~~ **the** system; and

(C) **is either a CWS or an NCWS, as defined in [327 IAC 8-2-1\(12\)](#) and [327 IAC 8-2-1\(63\)](#).**

(21) "Qualified ground water scientist" means an individual who possesses a bachelor's degree or higher in the physical sciences, for example, geology or engineering, with a sufficient level of experience to make sound professional judgments regarding site characterization and hydrogeology. This level of experience may be demonstrated by certification or registration as a professional geologist or engineer, either of whom shall have education or professional experience in hydrogeology or ground water hydrology.

(22) "Sanitary setback" means an area established around a CPWSS production well to protect ground water from direct contamination.

(23) "Small community public water supply system" means a public water supply system serving up to and including three thousand three hundred (3,300) customers.

- (24) "State chemist" means the office of the Indiana state chemist authorized by [IC 15-16-4](#) and [IC 15-16-5](#) to administer the use, application, storage, mixing, loading, transportation, and disposal of pesticides in Indiana under those chapters.
- (25) "Time of travel" or "TOT" means the calculated length of time a particle of water takes to reach a CPWSS production well from a certain point.
- (26) "Time of travel (TOT) threshold" means a threshold determined by the community or CPWSS to suit the hydrogeologic conditions and needs of the community; however, a minimum five (5) year TOT for modeled wellhead protection areas and three thousand (3,000) feet for fixed radius wellhead protection area is allowed.
- (27) "Wellhead protection area" or "WHPA" means the surface and subsurface area, delineated by fixed radius, hydrogeological mapping, analytical, semianalytical, or numerical flow/solute transport methods, which contributes water to a CPWSS production well or wellfield and through which contaminants are likely to move through and reach the well within a specified period.
- (28) "Wellhead protection program" or "WHPP" means a program to sustain drinking water quality in ground waters that supply public water supply wells and wellfields. The program is mandated by the 1986 amendments to the federal Safe Drinking Water Act, Title II, Section 205, Subsection 1428.
- (29) "Well log" means a drilling record that describes the subsurface formations that have been drilled through and gives details of well completion as required by [IC 25-39-4](#) and [312 IAC 13-2-6](#).

(Water Pollution Control Division; [327 IAC 8-4.1-1](#); filed Feb 28, 1997, 4:18 p.m.: 20 IR 1723; filed Mar 6, 2000, 7:56 a.m.: 23 IR 1627; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: [20071219-IR-327070553BFA](#); readopted filed Jul 29, 2013, 9:21 a.m.: [20130828-IR-327130176BFA](#); errata filed Jul 31, 2017, 11:06 a.m.: [20170809-IR-327170349ACA](#); readopted filed Jun 14, 2019, 1:59 p.m.: [20190710-IR-327190246BFA](#))

SECTION 5. [327 IAC 8-10-1](#) IS AMENDED TO READ AS FOLLOWS:

[327 IAC 8-10-1](#) Definitions

Authority: [IC 13-14-8](#); [IC 13-14-9](#); [IC 13-15-1-2](#); [IC 13-15-2-1](#); [IC 13-18-3-1](#); [IC 13-18-4-1](#)

Affected: [IC 13-11-2](#); [IC 13-13-5-1](#); [IC 13-18-2](#)

Sec. 1. In addition to the definitions in [IC 13-11-2](#) and [327 IAC 4](#), [327 IAC 8-1](#), the following definitions apply throughout this rule:

- (1) "Air gap" means an unobstructed vertical distance through atmosphere between the:
 - (A) discharge end of a pipeline supplied from a public water supply; and
 - (B) overflow rim of the receiving portion of the customer water system.
- (2) "Atmospheric vacuum breaker backsiphonage prevention assembly" means an assembly containing:
 - (A) an air inlet valve;
 - (B) a check valve seat; and
 - (C) an air inlet port.
- (3) "Backflow" means the flow of water or contaminants into the public water supply distribution system from a source other than the public water supply.
- (4) "Booster pump" means a pump installed on a pipeline to increase water pressure or flow.
- (5) "Commissioner" means the commissioner of the Indiana department of environmental management, or the commissioner's authorized representative.
- (6) "Cross connection" means any physical arrangement, including cross connection control devices not in working order, whereby a public water supply distribution system is directly connected, either continuously or intermittently, with any secondary source of supply, sewer, drain, conduit, pool, piping, storage reservoir, plumbing fixture, or other device that contains, or may contain, and is capable of imparting to the public water supply, contaminants, contaminated water, sewage, or other waste or liquid of unknown or unsafe quality.
- (7) "Cross connection control device" means any device or assembly, approved by the commissioner for construction on or installation in water supply piping, that is capable of preventing contaminants from entering the public water supply distribution system.
- (8) "Cross connection control device inspector" means a person who has:
 - (A) successfully completed training in testing and inspection of cross connection control devices from a training provider approved by the commissioner;
 - (B) received a registration number from the commissioner; and
 - (C) not been notified by the commissioner that the registration number has been revoked in accordance with section 11(b) of this rule.
- (9) "Cross connection hazard" means any customer facility that, because of the nature and extent of activities on the premises or the materials used in connection with the activities or stored on the premises, would

present an immediate or potential danger or health hazard to customers of the public water supply should backflow occur.

(10) "Customer" means any person who receives water from a public water supply.

(11) "Customer service line" means the pipeline from the public water supply to the:

(A) first tap, fixture, receptacle, or other point of customer water use; or

(B) secondary source of supply or pipeline branch in a building.

(12) "Customer water system" means all piping, fixtures, and appurtenances, including secondary sources of supply, used by a customer to convey water on the customer's premises.

(13) "Double check valve assembly" means a device or assembly composed of two (2) tightly closing shutoff valves surrounding two (2) independently acting check valves, with four (4) test cocks, one (1) upstream of the four (4) valves and one (1) between each of the four (4) check and shutoff valves.

(14) "Downstream" means the direction of flow when only the public water supply is supplying water through the customer water system and backflow is not occurring.

(15) "Pressure vacuum breaker" means a device or assembly containing an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the downstream side of the check valve for relieving a vacuum or partial vacuum in a pipeline.

(16) "Public water system" or "PWS":

(A) means a public water supply for the provision to the public of water for human consumption through pipes or other constructed conveyances, if the system:

(i) has at least fifteen (15) service connections; or

(ii) regularly serves **an average of** at least twenty-five (25) individuals daily at least sixty (60) days out of the year; ~~The term~~

(B) includes any:

(i) collection, treatment, storage, and distribution facilities under control of the operator of the system and used primarily in connection with ~~such~~ the system; and ~~any~~

(ii) collection or pretreatment storage facilities not under the **operator's** control that are used primarily in connection with the system; **and**

(C) is either a CWS or an NCWS, as defined in [327 IAC 8-2-1\(12\)](#) and [327 IAC 8-2-1\(63\)](#).

(17) "Reduced pressure principle backflow preventer" means a device composed of two (2) tightly closing shutoff valves surrounding two (2) independently acting pressure reducing check valves that, in turn, surround an automatic pressure differential relief valve, and four (4) test cocks, one (1) upstream of the five (5) valves and one (1) between each of the four (4) check and shutoff valves. The check valves effectively divide the structure into three (3) chambers. Pressure is reduced in each downstream chamber allowing the pressure differential relief valve to vent the center chamber to **the** atmosphere should either or both check valves malfunction.

(18) "Registration number" means a unique number assigned to a person by the commissioner demonstrating that the person:

(A) has fulfilled the education and examination requirements as described in section 11 of this rule; and

(B) is recognized by the state as a cross connection control device inspector.

(19) "Secondary source of supply" means any well, spring, cistern, lake, stream, or other water source, intake structure, pumps, piping, treatment units, tanks, and appurtenances used, either continuously or intermittently, to supply water other than from the public water supply to the customer, including tanks used to store water to be used only for firefighting, even though the water contained therein is supplied from the public water supply.

(20) "Spill resistant vacuum breaker" means an assembly containing an independently operating, internally loaded check valve, and an independently operating, loaded air inlet valve, located on the discharge side of the check valve. The assembly is to be equipped with a properly located, resilient seated test cock, a properly located bleed or vent valve, and tightly closing, resilient seated shutoff valves, attached at each end of the assembly.

(21) "Supplier of water" means any person who owns or operates a public water supply.

(22) "Training provider" means an organization that conducts or presents a cross connection control device inspector course approved by the commissioner in conformance with section 12 of this rule.

(23) "Upstream" means the direction of flow opposite to downstream.

(Water Pollution Control Division; [327 IAC 8-10-1](#); filed Sep 24, 1987, 3:00 p.m.: 11 IR 714; filed Mar 31, 1999, 1:50 p.m.: 22 IR 2515; errata filed Aug 30, 1999, 12:06 p.m.: 23 IR 25; filed Mar 6, 2000, 7:56 a.m.: 23 IR 1629; readopted filed Jan 10, 2001, 3:23 p.m.: 24 IR 1518; readopted filed Nov 21, 2007, 1:16 p.m.: [20071219-IR-327070553BFA](#); filed Nov 13, 2012, 11:39 a.m.: [20121212-IR-327100414FRA](#); readopted filed Jul 29, 2013, 9:21 a.m.: [20130828-IR-327130176BFA](#); readopted filed Jun 14, 2019, 1:59 p.m.: [20190710-IR-327190246BFA](#))

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